Medium-Mu Triode—Sharp-Cutoff Pentode

9-Pin Miniature Type

For Use as a Burst Amplifier and General-Purpose-Amplifier Tube in Color- and Black-and-White TV Receivers

ELECTRICAL CHARACTERISTICS – Bogey Values [a]

Heater Voltage, ac or dc	E_h	6.3		V
Heater Current	I_h	600		mA
Direct Interelectrode Capacitances:[b]		*Without External Shield*	*With External Shield* [c]	
Triode Unit:				
Grid to plate	$c_{g\text{-}p}$	2.2	2.2	pF
Input: G_T to (K_T, $G3_P$ + K_P + IS, H)	c_i	3.0	3.2	pF
Output: P_T to (K_T, $G3_P$ + K_P + IS, H)	c_o	2.2	2.4	pF
Heater to cathode	$c_{h\text{-}k}$	4.4	4.8[d]	pF
Pentode Unit:				
Grid No. 1 to plate	$c_{g1\text{-}p}$	0.05	0.05	pF
Input: $G1_P$ to (K_P + $G3_P$ + IS, $G2_P$, H)	c_i	9.0	9.0	pF
Output: P_P to (K_P + $G3_P$ + IS, $G2_P$, H)	c_o	3.6	4.4	pF
Heater to cathode	$c_{h\text{-}k}$	5.5	7.5[d]	pF
Pentode grid No. 1 to triode plate	$P_{g1}\text{-}T_p$	0.17max.	0.2max.	pF
Pentode plate to triode plate	$P_p\text{-}T_p$	0.09max.	0.008max	pF

For the following characteristics, see **Conditions**		*Triode Unit*	*Pentode Unit*	
Amplification Factor	μ	35	-	
Plate Resistance (Approx.)	r_p	5.8	165	kΩ
Transconductance	g_m	6000	9000	µmho
DC Plate Current	I_b	11.5	19	mA
DC Grid-No.2 Current	I_{c2}	-	4.2	mA
Cutoff DC Grid-No.1 Voltage(Approx.):				
For I_b=10µA	$E_{c1(co)}$	-5.8	-	V
For I_b=20µA	$E_{c1(co)}$	-	-9.5	V

6MU8

Conditions

		Triode Unit	Pentode Unit	
Heater Voltage	E_h	6.3	6.3	V
DC Plate Voltage	E_b	125	150	V
DC Grid-No.2 voltage	E_{c2}	-	150	V
DC Grid-No.1 voltage	E_{c1}	-1	-	V
Cathode Resistance	R_k	-	150	Ω

MECHANICAL CHARACTERISTICS

Maximum Overall Length . . . . 2.625 in (66.67 mm)
Maximum Seated Length . . . . 2.375 in (60.32 mm)
Maximum Diameter *(See Dimensional Outline)* . . . . 0.875 in (22.12 mm)
Envelope . . . . JEDEC T6-1/2
Base . . . . Small-Button Noval 9-Pin(JEDEC E9-1)
Dimensional Outline . . . . JEDEC 6-3
Terminal Diagram . . . . JEDEC 9AE
Type of Cathodes . . . . Coated Unipotential
Operating Position . . . . Any

MAXIMUM RATINGS - **Design-Maximum Values**

		Triode Unit	Pentode Unit	
DC Plate Voltage	E_b	330	330	V
DC Grid-No.2 Supply Voltage	E_{c2}	-	330	V
DC Grid-No.2 Voltage		*See Grid-No.2 Input Rating Chart* at front of Receiving Tube Section		
DC Grid-No.1 Voltage:				
Positive-bias value	E_{c1}	0	0	V
Heater-Cathode Voltage:				
Peak	e_{hkm}	±200	±200	V
DC	E_{hk}	100	100	V
Heater Voltage, ac or dc	E_h	5.7 to	6.9	V
Grid-No.2 Input: For grid-No.2 voltages up to 165 volts	P_{g2}	-	1.1	W
For grid-No.2 voltages between 165 and 330 volts		*See Grid-No.2 Input Rating Chart* at front of Receiving Tube Section		
Plate Dissipation	P_b	2.5	3.75	W

MAXIMUM CIRCUIT VALUES

Grid-No.1 Circuit Resistance:				
For fixed-bias operation	R_{g1}	0.5	0.25	MΩ
For cathode-bias operation	R_{g1}	1.0	1.0	MΩ

[a] Unless otherwise specified.

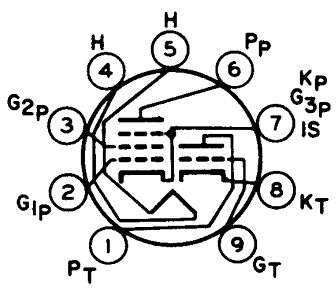
[b] Measured in accordance with the current issue of EIA Standard RS-191.

[c] With external shield JEDEC No. 315 connected to cathode of unit under test except as noted.

[d] With external shield JEDEC No. 315 connected to ground.

[e] As defined in the current issue of EIA Standard RS-239.

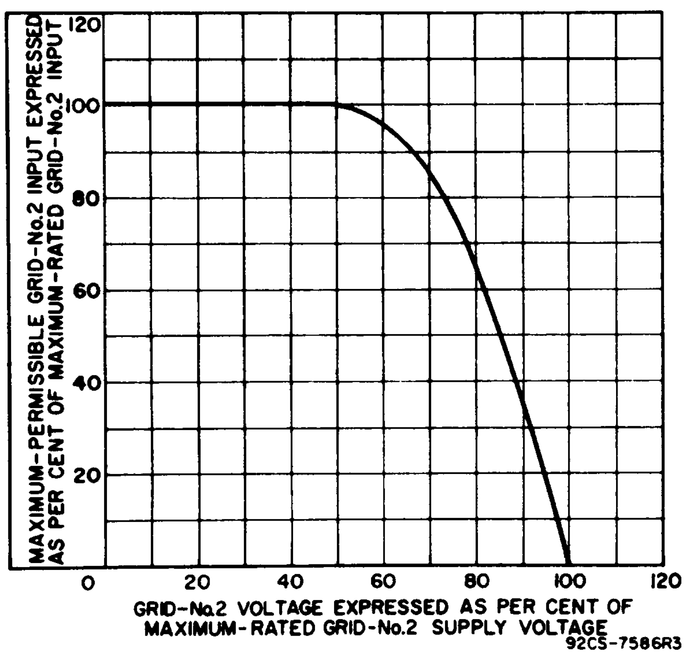
TERMINAL DIAGRAM(Bottom View)



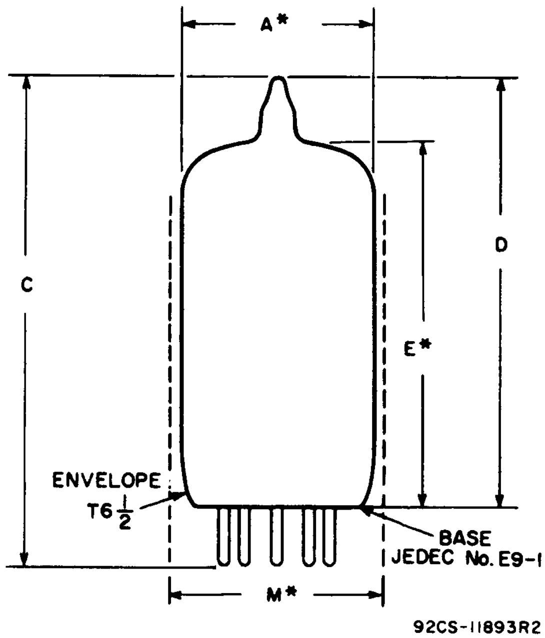
JEDEC 9AE

Pin 1 - Triode Plate
Pin 2 - Pentode Grid No.1
Pin 3 - Pentode Grid No.2
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Pentode Plate
Pin 7 - Pentode Cathode, Grid No.3 and Internal Shield
Pin 8 - Triode Cathode
Pin 9 - Triode Grid

GRID-NO. 2 INPUT RATING CHART



DIMENSIONAL OUTLINE JEDEC 6-3



DIMENSION	INCHES			MILLIMETERS		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A*	0.800	-	0.845	20.32	-	21.46
C	-	-	2.625	-	-	66.67
D	-	-	2.375	-	-	60.32
E*	1.906	2.000	2.094	48.41	50.80	53.19
M*	-	-	0.875	-	-	22.22
MILLIMETER DIMENSION DERIVED FROM INCH DIMENSION						
* As defined in the current issue of EIA standards RS-209-A1.						